## REMARKS

Claims 5-8 are pending in this application.

Claim 6 has been amended herein solely for clarification purposes. Applicants believe that no new matter has been added by this amendment and that this amendment presents no new issues that require further consideration or search by the Examiner.

In the October 31, 2006 final Office Action, the Examiner withdrew his previous rejections of claims 5-8 under 35 U.S.C. § 103(a) as being obvious over Liu et al., The Plant Cell, Vol. 10, pp. 1391-1406, August 1998 in view of Shinwari et al., Biochemical and Biophysical Research Communication, Vol. 250, pp. 161-170, September 1998, in view of the Declaration of Kazuko Shinozaki and Mie Kasuga Under 37 C.F.R. § 1.132, which was submitted on August 18, 2006 and established that both of those two references describe Applicants' own invention.

However, the Examiner maintained his rejection of claims 5 and 7 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,417,428 (Thomashow et al.). According to the Examiner, Thomashow et al. teaches isolated DNA encoding the CBF2 transcription factor of SEQ ID NO: 13 in SEQ ID NO: 12, which is identical to Applicants' SEQ ID NO: 8. The Examiner states that Thomashow, which claims priority to U.S. Patent Application No. 09/017,816, has a priority date for this disclosure of February 3, 1998 (the filing date of Serial No. 09/017,816), which is prior to the claimed priority date of October 14, 1998. The Examiner also asserted that Thomashow discloses a transgenic plant transformed with an isolated DNA encoding SEQ ID NO:13 operably linked to a stress responsive promoter.

The Examiner also rejected claims 6 and 8 under 35 U.S.C. § 103(a) as being obvious over Thomashow. According to the Examiner, Thomashow discloses the coding sequence of CBF2 (SEQ ID NO:12 of Thomashow), such that, even if this sequence is not completely the same as the sequence of DREB1C gene (SEQ ID NO:7 of the present invention), a transgenic plant according to claims 6 and 8 is obvious based upon Thomashow, because it is unclear if

there is any showing of unexpected results by transforming a plant with DNA comprising Applicants' SEQ ID NO: 7 nucleotide sequence as opposed to Thomashow's SEQ ID NO: 12.

In Applicants Response filed August 18, 2006, Applicants argued that Thomashow describes a transgenic plant with CBF3 gene, but does not disclose a transgenic plant transformed with CBF2 gene (SEQ ID NO:12), but the Examiner responded that there is no requirement for Thomashow to reduce to practice its claim 8; that SEQ ID NO: 13 of Thomashow is identical to SEQ ID NO: 8 of the present application; and that Thomashow explicitly discloses that the rd29b gene promoter is encompassed by the invention. Applicants also argued that Thomashow does not describe the idea of introducing CBF genes into the plant together with a stress responsive promoter comprising a DRE region, and the Examiner responded that the recitation of the promoter in the claims is not limited to a stress responsive promoter comprising a DRE region.

Applicants contend, however, that the subject matter in the Thomashow et al. reference that is used to reject claims 5-8 herein is not supported by U.S. Patent Application No. 09/017,816 ("Thomashow '816"), a copy of which Applicants were at long last able to obtain from the USPTO, such that Thomashow is not entitled to the February 3, 1998 filing date. Thomashow '816 describes the amino acid sequence and nucleotide sequence, which are similar to those of DREB1C. Thomashow '816 also includes working examples of transgenic plants comprising CBF1 (DREB1B) gene, but no working example of transgenic plants comprising the DREB1C gene.

Furthermore, Thomashow '816 demonstrate any transgenic plant using a stress-responsive promoter. On pages 29-30 of Thomashow '816, Thomashow et al. teach neither the advantage of stress-responsive promoters nor the disadvantage of constitutive promoters (e.g., dwarfing). At page 29, lines 21-26 of Thomashow '816, Thomashow et al. state:

> "a strong constitutive promoter could be used to cause increased levels of COR gene expression in both non-stress and stressed plants which in turn, results in enhanced freezing and dehydration tolerance. A tissue specific promoter could be used to alter COR gene expression in tissues that are highly sensitive to stress (and thereby enhance the stress tolerance of these tissues)."

In view of this description, it is considered that Thomashow et al. think that the stress-inducible promoter and the constitutive promoter can be used in the same way for producing a transgenic plant. In other words, Thomashow et al. do not teach the advantage of stress-responsive promoters or the disadvantage of constitutive promoters (e.g., dwarfing).

Instead, the disclosure of Thomashow '816 teaches away the use of stress responsive promoter comprising a DRE region to which said DREB1C protein can bind. As described on pages 2-3 of the present application, "it is reported that a plurality of genes are involved in the acquisition of dehydration, low temperature or salt tolerance in plants [Plant Physiol., 115:327-334 (1997)]. Therefore, a gene encoding a transcription factor capable of simultaneously activating the expression of a plurality of genes involved in the acquisition of stress tolerance has been introduced into plants, yielding plants with high stress tolerance."

In fact, Thomashow et al. describe that "a strong constitutive promoter could be used to cause increased levels of COR gene expression in both non-stress and stressed plants which in turn, results in enhanced freezing and dehydration tolerance." Thomashow et al. provide only a transgenic plant transformed with CBF1 gene under the control of the strong constitutive promoter: cauliflower mosaic virus (CaMV) 35S promoter (See page 45, last paragraph of Thomashow '816) as working examples of transgenic plants.

The inventors state at page 3, lines 1-7 of the present application:

> However, when a gene which induces the expression of a plurality of genes is introduced into a host plant, the genes are activated at the same time. As a result, the energy of the host plant is directed to production of the products of these genes and intracellular metabolism of such gene products, which often brings about delay in the growth of the host plant or dwarfing of the plant.

The use of the stress-responsive promoter enables DREB1C gene to amplify itself in response to environmental stress (self-amplification). As a result of high level and stable expression of DREB1C gene in a short period of time, the transgenic plant acquires stress resistance without dwarfing.

At the time of filing of this application, it was not known what kind of promoters should be used for high level and stable expression of artificially introduced genes only when the plant is subject to the stress. The inventors hereof found and demonstrated, for the first time in the world, that the self-amplification mechanism, i.e., the use of a promoter comprising DRE region, is useful for producing excellent stress resistant plants.

As described above, when a promoter such as CaMV35S, which induces the expression of a plurality of genes, is introduced into a host plant, the genes are activated at the same time. As a result, the energy of the host plant is directed to production of the products of these genes and intracellular metabolism of such gene products, which often brings about delay in the growth of the host plant or dwarfing of the plant. (See Example 4 of the present invention). The inventors have conducted preliminary experiments using other promoters such as erd1, rd22 and rd29B, which do not comprise DRE region, and the results of these experiments showed low level and unstable expression of the introduced genes in response to the stress.

Thomashow et al. describe nothing about the stress-responsive promoter according to the present invention. They describe a "tissue specific promoter" that is used to alter COR gene expression in tissues that are highly sensitive to stress and a promoter that "turns on at a temperature that is warmer than the temperature at which the plant normally exhibits cold tolerance" (See page 29, lines 26-28 of Thomashow et al. '816). The latter promoter means a promoter that is similar to a constitutive promoter, because this promoter can induce the gene expressions at warmer temperature than the temperature at which the plant normally exhibits cold tolerance. In contrast, the stress responsive promoter according to the present invention is a promoter comprising a DRE region to which DREB proteins such as DREB1C protein can bind.

Therefore, a person skilled in the art could not have readily made a transgenic plant transformed with a DNA that encodes a protein consisting of the amino acid sequence as shown in SEQ ID NO: 8, operably linked downstream of a stress responsive promoter based upon the disclosure of Thomashow '816. As such, the transgenic plant according to claims 5 and 7 is not anticipated by Thomashow '816, and the transgenic plant according to claims 6 and 8 is not obvious in view of Thomashow '816.

Accordingly, as set forth above, although Thomashow et al. claim priority from U.S. Patent Application No. 09/017,816, filed February 3, 1998, the subject matter in the Thomashow et al. reference that is used to reject claims 5-8 herein is not supported by U.S. Patent Application No. 09/017,816 and, therefore, has a filing date only of November 23, 1998. Thus, the Thomashow et al. reference has a priority date for this disclosure of November 23, 1998.

Applicants herewith submit a certified translation of Japanese Patent Application No. 292348/1998, filed October 14, 1998, from which the present application claims priority under 35 U.S.C. § 119, thus perfecting the claim for foreign priority from this Japanese application. Accordingly, because the present application has a foreign priority date of October 14, 1998 that is prior to the November 23, 1998 filing date of the Thomashow et al. reference, the rejection based upon Thomashow et al. is overcome. Applicants respectfully request that the Examiner withdraw his prior art rejections of claims 5-8 under 35 U.S.C. § 102(e) or § 103(a) based upon Thomashow et al.

The Examiner further rejected claims 5-8 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 7,045,355 (Kazuko et al.). According to the Examiner, the conflicting claims are not patentably distinct from each other because the claimed transformed host cell and vector comprising SEQ ID NO: 7 renders obvious the transgenic plant of the current invention. In response to this rejection, Applicants herewith submit a Terminal Disclaimer by the co-owner of the 100% of the present application, Incorporated Administrative Agency, National Agriculture and Bio-Oriented Research Organization, which is 100% owner of U.S. Patent No. 7,045,355, disclaiming the term of the present application that extends past the term of commonly-owned U.S. Patent No. 7,045,355. Applicants also submit herewith the fee of $130 for filing the terminal disclaimer, and state that if any additional; fees are due the Commissioner is authorized to charge said fees to our Deposit Account No. 50-0552.

**Conclusion**

Reconsideration of the present application, as amended, is requested. If, upon review, the Examiner determines that the application is not in condition for allowance, Applicants respectfully request the Examiner to contact the undersigned for a telephone interview before an Office Action is issued in the application. A favorable action on the merits is earnestly solicited.

Respectfully Submitted,
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